DIGITAL QUADRATURE MODULATOR AND DEMODULATOR

Publication number: JP11163953 (A)
Publication date: 1999-06-18
Inventor(s): IWAKI YOSHIYUKI; ONISHI MAKOTO
Applicant(s): HITACHI ELECTRONICS
Classification:
- international: ***H04L27/20; H04L27/22;*** **H04L27/20; H04L27/22;** (IPC1-7): H04L27/20; H04L27/22
- European:
Application number: JP19970324647 19971126
Priority number(s): JP19970324647 19971126

Also published as:
JP3953164 (B2)

Abstract of **JP 11163953 (A)**

PROBLEM TO BE SOLVED: To prevent gain difference, phase difference and a DC offset from occurring between in-phase component data and orthogonal component data by providing one D/A converter and executing a digital signal processing in sampling frequency conversion and an orthogonal modulation. SOLUTION: Input data is converted into a sampling frequency by an interpolator 4, sent to a filter 6 and, moreover, transmitted to a multiplier 8. In the same way, orthogonal component data of the sampling frequency is inputted to the interpolator 5 with an input terminal 2 and orthogonal component data which is converted into the sampling frequency is transmitted to the multiplier 9 through the interpolator 5 and a filter 7.; In-phase component data converted into the sampling frequency is multiplied by cos(2.&pi .fcT) by the multiplier 8 and orthogonal data is multiplied by sin(2.&pi .fc.T) by the multiplier 9. Then, they are added by an adder 10, transmitted to the D/A converter 11, converted into analog data and outputted as orthogonally converted data through an output terminal 3.